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ART. I.—CASE OF FIBRO-SCIRRHOUS TUMOUR,—CONTINUANCE FIFTEEN YEARS,—DEATH,—NECROSCOPY,—REMARKS.

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HISTORY.—Miss S., of delicate and slender frame, aged fifty-four years, died on the 7th August, 1840. She was of scrofulous habit, and subject to glandular swellings of the neck. Fifteen years previous to her decease, she first observed a tumidity of her abdomen, which produced a sensation of fulness and distention. From this time her *catamenia* ceased to flow, and were never afterwards restored. The abdomen continued to enlarge, which circumstance, and the sudden suppression of the accustomed secretion, caused some apprehension on the part of her too solicitous friends, calculated to *reflect* upon her heretofore fair and unsullied character. In due time, however, her faded complexion and emaciated form, together with an increase of her malady, dispelled their ill-grounded suspicions, and convinced them that there was no rational cause either to affect the matron's pride, or raise the virgin's blush. Previous to this she enjoyed good health. Her skin soon became sallow, and, towards the termination of her complaint, of an earthy hue. Her appetite was generally good. During the long period of the gradual developement of the tumour, she was not prevented until within six weeks of her death, from attending to her accustomed daily avocations. Towards the close of her malady there was some cough; difficulty in moving about; a "sense of bearing down;" occasional abdominal pain; dyspeptic symptoms; swelling of the feet and legs; paroxysms of chills and fever. Her body was much emaciated, and it was with great difficulty that her feeble and exhausted frame could sustain the enormous load with which she was obliged to move about. Her bowels were constipated, and great pain was produced by evacuating their contents; her urine could not be voided without an assistant to push up the tumour from the brim of the pelvis, for the purpose of allowing the urine to escape from the neck of the bladder.

August 7th, 1840. *Necroscopy five hours after death.*—There are scrofulous enlargements of the glands of the neck, behind the ears, and under the chin, most of which are cicatrised, and a few ulcerated.

The lungs on the anterior surface are of a dark red colour, and upon pressing portions between the fingers, numerous little hard bodies are felt, varying in size from a millet seed to a garden pea. The anterior lobe contains many of these tubercles clustered in bunches, and forming a considerable mass. They resemble the *miliary tubercle* of Laennec. Other portions have the natural spongy structure and the crepitous feel.

Upon opening the cavity of the abdomen, an irregular ovoid tumour is seen anterior to the intestines, and occupying the hypogastric, umbilical, and epigastric regions, extending into the pelvis, and filling its entire cavity. After carefully removing the tumour from its different attachments, it weighed *forty-five pounds*, and measured from the apex to its base *twenty-one inches*, through its lateral portion *nineteen inches*, and from the front to its back surface, through the centre, *nine inches*.

The liver, spleen, pancreas, and kidneys were normal.

The tumour had a covering of the peritoneum, which kept it in its situation, and bound it firmly to the parietes of the abdomen, to the intestines, pancreas, spleen, uterus, and bladder. The whole length of the *colon* was attached to it by strong adhesions. The uterus lay in front, and the broad ligaments were stretched over it at the lower portion where it emerged from the pelvis, and adhered firmly to its lower surface. The *Fallopian tubes* and *ovaries* were normal, and could be traced in front of the lower portions of the tumour on each side of the uterus, strongly attached to it. The bladder was also in front of the tumour, and fastened to it. This viscus, as well as the uterus, was pushed above the brim of the pelvis, and the necks of both were very much elongated. Many blood-vessels supplied the tumour from these attachments.

The tumour appears to have originated either in the cavity of the pelvis or abdomen, and by its gradual enlargement pushed the peritoneum before it, which gave it a covering and supplied it with blood-vessels. The external surface presented a smooth and uniform appearance. Upon making a section through the middle portion, a crepitus is produced by the edge of the scalpel. The internal substance exhibits a variety of appearances, generally of a whitish colour, but some portions of it have a blueish, others a dusty gray and yellow colour.

The whole appears to be a mass formed by the aggregation of tumours or lobules in their progressive developements. The consistence and structure varies, portions being of a loose structure and containing cells. The greater mass is *hard* and intermixed with *cartilaginous* and *bony matter*. The upper portion of the tumour is composed of a homogeneous substance of almost cartilaginous consistence, and mixed with a substance of less density of a whitish colour. Lower down it represents a dense substance resembling a section of pork. Throughout the greater part its consistence varies from that of fresh pork to boiled udder or brain. A large quantity of this carcinomatous matter throughout the whole tumour is accumulated in cells. In some places the lardaceous substance forms a homogeneous mass of considerable bulk. Fibrous matter, mixed with glandular substance, is seen throughout the whole tumour. Red points can also be traced in different parts, of the colour and consistence of the fibrine of blood.

Portions of it again are composed of almost entire osseous matter; spicula of bone are seen at different points, of an inch in length and a line in thickness.

In the centre of the tumour is a large cavity containing a fluid of the consistence of cream, intermixed with shreds of cellular tissue, detached blood-vessels, and a curdy matter of a grayish colour. There are other smaller cavities containing serum.

I will not further attempt to enter into details, but will content myself with saying, that after a minute and careful examination of the different structure and consistence of the tumour itself, and a comparison with Professor Carswell's "Illustrations of the Elementary Forms of Disease," I am satisfied that in this interesting specimen, the scirrhous, lardaceous, mammary, medullary, and hæmatoid forms are all combined.

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Chestnut street, Nov. 22, 1840.

ART. I.—FUCHS ON THE INFLUENCE OF PROFESSONS ON HEALTH.[1]

Professions, in medical statistics, may be considered certain determined combinations of external circumstances to which classes of men are exposed. Their influence is much more powerful and obvious in India, where they are hereditary, than in Europe; yet several professions in Europe have a remarkable effect in modifying the extent of sickness and death to which their members are liable. Before this full effect can be determined, extended series of observations, made by different individuals, must be collected; and the observations must embrace all essential facts, capable, like other facts in physical science, of being compared. To determine the relative health of any profession or class of men, and the deleterious influence of any circumstance in which they may be placed, the facts required are simple and few; but it is very rare that they can all be obtained, or at least are all furnished by writers. In the first instance, it is necessary to ascertain the number of individuals in each profession between the ages of 10-20, 20-30, &c., and then the total cases of disease, the average number constantly sick or the days of sickness, and the deaths in a determined time; from which data the annual diseases and deaths in 1000, and the average proportion of sick at all ages may be deduced. The sicktime and mortality in an assumed unit of lifetime thus becomes a determined quantity, which may be compared with any other quantity. To give an example: in the island of Corfu[2] the average force of the British troops was 1974·5 during the six years 1816-21; equivalent to 11,847 (1974·5×6) years of life, 620 of which were years of sickness. The total number of cases treated amounted to 14,098. Whence it is found by direct proportion that in a year 1000 soldiers living suffered 1190 attacks of sickness; that 52 of them were on an average constantly ill, and that 27 died. Of 1000 cases treated, 23 terminated fatally. A table in which these results were compared with those presented by other classes of men, would constitute a law of health for professions: it would teach the medical practitioner how many patients in a known population he may expect to attend; the general on how many effective men he may count in a campaign; the government how the labouring, manufacturing, agricultural, and higher classes are affected by political or economical measures. The sick-clubs and self-supporting dispensaries can only be firmly established by a knowledge of the quantity of sickness in the class they embrace; and if they enter every individual, distinguishing the age on their books, they will soon be in possession of a mass of useful facts.

The observations of Professor Fuchs were collected from the reports of a trades' institution in Würtzburg, to which each workman employed contributed weekly, in order to obtain a certain sum in sickness. These reports, published since 1788, distinguish the contributions of each trade; the deaths and attacks of sickness occurring in each trade have been distinguished from the first: and from these contributions and payments the learned professor has been enabled to ascertain that, since the foundation of the society in 1786 (49 years), the average number of contributions has been 1186; the

[1] British and Foreign Medical Review, October, 1840, p. 373.

Ueber den Einfluss der verschiedenen Gewerbe auf den Gesundheitszustand und die Mortalität der Künstler und Handwerker in den Blüthenjahren, &c. Von Dr. C. H. Fuchs.

A Statistical Memoir on the Influence of Various Professions on the Health and Mortality of Mechanics and Artisans in the Prime of Life; founded on the Tables of the Institution for Sick Mechanics in Würtzburg from 1786 to 1834. By Dr. C. H. Fuchs, Professor of Medicine in Würtzburg. Berlin, 1835. 8vo.

[2] Hennen's Medical Topography of the Mediterranean. We have not been fortunate enough to meet with all these data in any other work, foreign or English. This article was written before the appearance of the army medical reports.

same as if 58,125 members had lived and been occupied in their respective arts one year in Würtzburg: 275 cases of sickness and nine deaths occurred on an average annually; for the total attacks of sickness in 49 years amounted to 13,268; the deaths to 445. Of 10,000 contributors, 2,282 fell sick, and 76 died, yearly; and of 10,000 cases treated, 327 (1 in 29·8) ended fatally. The value and defect of Professor Fuchs's method of inquiry are sufficiently obvious; but we shall compare it with what was said before, to impress the right method more forcibly on future observers.

Professions.	Mean age.	In 1000 living, the annual			Deaths in 1000 cases of sickness.
		Cases of disease.	Number constantly sick.	Deaths.	
Soldiers, &c. (in Corfu.)	Nearly 26	1190	52·34	27·4	23·05
Artisans, &c. (in Würtzburg.)	15-35	228·2		7·6	32·70

The ages of neither class were certainly known; and this table only shows the attacks of sickness and deaths at the ages specified; the attacks of sickness are however probably the same at all ages between 10-70. A material defect in the German professor's researches, it will be perceived, is the omission of the average proportion of sickness; investigated in the friendly societies of Great Britain by Dr. Price and the Highland Society, a defect which the data already before him will probably supply. It is almost unnecessary to remark, that the excessive mortality and sickness of the soldiers is in part owing to the climate and fevers of the Mediterranean. The mortality and sickness of soldiers in times of peace is in their native climate greatly above the average; of the English infantry eighteen in a thousand die annually, while the mortality of the entire population is only ten in a thousand at the corresponding age. The mortality of the Würtzburg artisans is apparently low; Dr. Fuchs states that the ages of the different classes were nearly the same, on an average between 15 and 35 years, and this may be fairly brought within the narrower mean of 20-30; at which period of life the mortality in Carlisle was 7·54 per 1000, differing to a trifling extent from 7·60. With Dr. Fuchs we are disposed to place considerable reliance on this general result, although the body of artisans in the society were to a certain extent selected; and we subjoin for comparison the deaths in 1000 at the same age in England and Wales, in Belgium, and in Sweden;

England and Wales.	Belgium.	Sweden.	Wurtzburg.	Carlisle.
10·1	9·1	8·9	7·6	7·5

The proportion of 32·7 deaths in 10,000 cases treated, the professor thinks highly favourable; but on what grounds we do not know. Nearly the same mortality (33·4) has been observed among the sick of the British troops in Bengal;[1] and in Corfu, only 230 died in 10,000 treated. At the same time the attacks of sickness suffered by 1000 persons in Würtzburg, Corfu, and Bengal, were in the proportion of 228, 1190, 1713.

The mean mortality of the Würtzburg artisans, expressed in parts of 10,00, being 76; the mean frequency of sickness 2282; when the same operation has been repeated for each profession, on a sufficient number of individuals, their relative *mortality*, and what Professor Fuchs has called their *morbility*, may be determined by comparison with the mean standard.

Before examining the professions separately, it is necessary to observe that: 1. The institution, and consequently the calculations, only embrace the incorporated trades; day labourers, hackney coachmen, and some others,

[1] Burke on the Mortality of Troops in India, 1826–32. Edinb. Journal, No. 109.

are consequently excluded. 2. That only journeymen and apprentices belong to the institution. And this is so far for the advantage of the calculation, as the sick are nearly of the same age (15-35); besides, for obvious reasons, a profession exercises its baneful influence far more intensely on journeymen and apprentices than on their masters, who often only superintend without working at their business, and so avoid its discomforts and dangers. 3. Formerly several trades, for example, watchmakers and gunsmiths, carpenters and slaters, &c., formed one united company, and were placed together in the accounts. Professor Fuchs had no means of separating these associated trades, and was himself compelled to combine several of the smaller allied trades, in order to obtain more probable results. 4. Members having syphilitic diseases, and, up to the year 1828, also itch, were not entered on the books.

The second and third columns of the following tables, showing the total deaths and diseases of each profession, were calculated from the payments made in the 49 years; but the contributors belonging to each profession were only known from 1818 to 1834; and the numbers in the tables were obtained by first ascertaining the relation of the sick to the contributors during these seventeen years, and calculating from the relation so obtained the number of contributors in the earlier period. For example, of 920 weavers who contributed between 1818 and 1834, exactly 269 had an attack of sickness; and, as during the 49 years 480 of the weavers fell ill, the following proportion gives the total number of weavers who had contributed, 269 : 920 : : 480 : 1642; which last sum is entered in the first column of the table.

We purposely withhold the arrangement of these 54 trades in the elaborate table of Professor Fuchs, according to their greater or less mortality and morbility, and all the professor's reasonings on their relative salubrity. Professor Fuchs is apparently ignorant or forgetful of the well-established physiological fact, that the fluctuations of mortality between 15 and 35 are limited to nearly 7-20 in 1000 of those who remain in their native climate, or he would not reason seriously with the great anomalies of the fifth column before his eyes. These anomalies are principally due to the paucity of observations, which may be sufficiently augmented if proper returns were obtained from all similar institutions; on this account the paper before us deserves attention. It is one of the numerous series of observations which we hope to collect in this Journal, from which our readers, or perhaps ourselves at some future time, may deduce rational, well-founded generalisations. It may, however, be observed, that in this arrangement, and in that which follows, those classes in which the morbility exceeds 2282, the mortality 76, are considered unhealthy; on the contrary, those professions are considered salubrious in which the proportions fall below the average.

The influence of a profession on health is the result of several appreciable agents, to determine the exact value of which is the next step in the inquiry. For this purpose Dr. Fuchs has grouped all the professions in the table according to the locality in which they are carried on; the temperature and moisture connected with their exercise; the materials employed; the muscular force required; the position and necessary movements of the body; the aliment insured to their followers; the amount of wages; their influence on the education and the state of mind of their members. This has the further advantage of increasing the number of facts in each category, and diminishing the chance of error from differences of age. The first column shows the extent of the observations or the number of yearly contributors in the group; the second the attacks of sickness in 10,000 persons living one year; the third the annual deaths in 10,000; and the fourth the deaths in 10,000 cases treated. It is right to observe that the morbility is diminished disproportionably in some professions, where the contributors were well off, and resorted less frequently than others to the institution; all the deaths were recorded. To catch the eye more readily, an * has been affixed where the mortality and morbility were above, a † where they were below the

average; the * therefore indicates unhealthy professions when over the column of morbility and mortality.

Influence of Locality.	Total contributors.	Morbility.	Mortality.	Relative Mortality.
Professions carried on (1) *in the Open Air.*	5622	†2138	*99	465
Thatchers, fishermen, sailors, gardeners, masons, stonecutters, plasterers, carpenters, and slaters. [The increased mortality is probably owing to accidents.]				
(2) *Alternately in the Open Air and Indoors.*	11700	†2212	†59	266
Coopers, surgeons, hairdressers, glaziers, farriers, chimney-sweepers, butchers, millers, tanners, grinders, ropemakers, waxchandlers, wheelwrights.				
(3) *in Confined Rooms.*	40793	*2341	*78	338
The 34 remaining professions.				
(4) *partly in Water.*	3569	*2536	†70	276
Fishermen, sailors, millers, tanners.				
Influence of Temperature and Moisture.				
Professions carried on (1) *in Warm, Dry Air.*	660	*2892	†66	228
Blacksmiths, coppersmiths, locksmiths, nailers, goldsmiths, beltmakers, chimney-sweepers, swordmakers, tinmen, artillery-smiths, pewterers.				
(2) *in Warm, Moist Air.*	6877	†1913	†52	273
Bakers, brewers, confectioners, potters, soapboilers, gilders, lackerers, waxchandlers.				
(3) *in Cold, Moist Air.*	8405	†2165	†83	384
Printers, dyers, grinders, plasterers, weavers, and the professions carried on in water.				
(4) *in Common Air.*	36183	†2268	*81	359
The 27 remaining professions.				
(5) *in an Elevated Temperatare.*		*2393	†59	247
(6) *in Moist Air.*		†2051	†69	338
(7) *in Rapid Alternations of Heat and Cold.*	7093	*2482	86	346
Blacksmiths, barbers, hairdressers, chimneysweepers, brewers, millers, fishermen, and tanners.				
Influence of the Materials employed.				
Professions carried on (1) *in a Dusty Atmosphere.*	18602	†2267	†62	275
(2) *in an Atmosphere of Mineral Particles.*	7827	*2762	*77	311
Stonecutters, masons, plasterers, locksmiths, blacksmiths, artillery-smiths.				

	Total contributors.	Morbility.	Mortality.	Relative Mortality.
(3) *in an Atmosphere of Vegetable Particles.*	8174	†2160	†59	278
Bakers, millers, hairdressers, chimney-sweepers, ropemakers.				
(4) *in an Atmosphere of Animal Particles.*	2256	†1878	†23	125
Saddlers, furriers, tapesterers, brush-makers, clothbearers, hatters.				
(5) *in Smoke and Carbonaceous Vapours.*	5342	*3167	†71	224
Blacksmiths, locksmiths, nailers, sword-makers, tinmen, artillery-smiths, pewterers, coppersmiths.				
(6) *in Emanations of Mercury, Lead, and Arsenic.*[1]	4732	1525	58	388
Pewterers, coppersmiths, tinmen, goldsmiths, beltmakers, hatters, potters, plasterers.				
(7) *in Metallic Emanations generally.*		2430	63	263
(8) *in Vegetable Emanations.*	9542	2202	61	276
Bakers, coopers, brewers, dyers, lackerers, weavers.				
(9) *in Animal Exhalations.*	3768	1759	32	181
Butchers, tanners, soapboilers, wax-chandlers.				
INFLUENCES OF MUSCULAR EXERTION.				
Professions requiring (1) *great Muscular Efforts.*	13383	†2133	†67	317
Brewers, coopers, thatchers, sailors, blacksmiths, masons, stonecutters, butchers, millers, nailers, wheelwrights, carpenters, slaters.				
Professions in which (2) *but Moderate Exertion is required,*	18926	*2371	*104	439
Glovers, lacemakers, bookbinders, brush-makers, surgeons, confectioners, dyers, hairdressers, goldsmiths, shopkeepers, farriers, tailors, shoemakers, tapesterers, watchmakers, gilders, pewterers.				
(3) *Slight but continued Activity is required.*	26316	†2211	†58	264
The 36 remaining professions.				
INFLUENCES OF CERTAIN DETERMINED POSITIONS AND MOVEMENTS.				
Professions in which the Men (1) *are almost always Sitting.*	18829	*2577	*99	385
Glovers, lacemakers, brushmakers, goldsmiths, beltmakers, furriers, saddlers, tailors, shoemakers, tinmen, weavers, watchmakers.				

[1] The greater part of these trades are conducted on a very small scale at Würtzburg; and many precautions are taken against the deleterious influence of metallic vapours.

	Total contributors.	Morbility.	Mortality.	Relative Mortality.
(2) *generally Stand at Work.*	22648	*2451	†69	281
Bakers, bookbinders, dyers, glaziers, blacksmiths, turners, coppersmiths, butchers, nailers, grinders, locksmiths, joiners, swordmakers, ropemakers, plasterers, carpenters, wheelwrights, artillerysmiths.				
(3) *Alternately Sit and Stand.*	16648	†1713	†61	357
All the other professions.				
(4) *Work in a Stooping Position,*	24943	*2858	*95	336
Sitting,—glovers, brushmakers, goldsmiths, tailors, shoemakers, watchmakers. *Standing*,—glaziers, grinders, locksmiths, joiners, wheelwrights, gilders, pewterers, coopers, gardeners, tanners.				
(5) *Carry Burdens.*		†1939	†69	355
(6) *Climb, go up and down Stairs.*		†2100	†74	355
(7) *Use the Axe or Hammer,*		†2211	*81	368
(8) *Work with the Four Extremities.*		†2220	†71	318
INFLUENCE OF ALIMENTS.				
Professions which Prepare (1) *Articles of Food.*	6983	†1732	†38	223
Bakers, butchers, gardeners, confectioners.				
(2) *Drinks.*		*2378	†63	266
Brewers, coopers.				
INFLUENCE OF WAGES.				
Professions (1) *paid well in Summer, badly in Winter.*		†2138	*99	465
Thatchers, fishermen, gardeners, masons, plasterers, carpenters.				
(2) *which obtain High Wages.*	9886	†1634	†59	365
Brewers, lacemakers, printers, glaziers, goldsmiths, beltmakers, shopkeepers, tanners, swordmakers, ropemakers, tapesterers, watch and gunmakers, gilders.				
(3) *which gain Low Wages.*	19858	*2714	*103	380
Glovers, brushmakers, barbers, hairdressers, potters, blacksmiths, butchers, nailers, grinders, tailors, shoemakers, weavers, coopers, (weisskuffner.)				
(4) *which gain Moderate Wages.*	22759	†2223	†59	247
The remaining 21 professions.				
INFLUENCE OF EDUCATION AND STATE OF MIND.				
Professions of which the Common Members (1) *receive a Tolerable Education.*	4928	†1118	†73	653
Shopkeepers, printers, goldsmiths, sculptors, watchmakers, &c.				
(2) *can scarcely hope to become Masters.*	9360	†1929	*86	448
Brewers, printers, millers, masons, carpenters.				
(3) *are subject to Reverse of Fortune.*				

Under this last head are to be classed those professions which depend for their existence on commerce, or in small German towns, such as Würtzburg, principally on fashion. "The most striking example," says Dr. Fuchs, "of the influence exercised by fashion on the health of a profession, is furnished by the hairdressers of Würtzburg. The twenty-two masters who, with numerous journeymen, in 1803 dressed the hair and the wigs of the inhabitants of Würtzburg, have declined to eight, who together keep but five men, and the profession which Adelmann esteemed healthy and ever cheerful, has lost its high spirits, and occupies, by its great mortality (196), one of the lowest places among the unhealthy professions. I am much inclined to ascribe the unfavourable state of health experienced by the hairdressers in great part to the mental impression which the decline of that noble art has exercised on its disciples."

In stating that the increased mortality of the hairdressers was, in our opinion, *chiefly* owing to the greater proportion of *old men*—to a necessary difference of age, such as is found in all declining professions—we do not wish to cast a doubt on the great sensibility of those distinguished artists who have so long decorated the heads of the inhabitants of Würtzburg. No doubt the sudden fluctuations of wages and employment in the manufacturing towns of this kingdom have a most powerful effect on the health and mortality of the operatives.

To sum up the results of this investigation, in reply to the question, "What influence have professions on the morbility and mortality, independently of the form of malady; what professions are healthy, what unhealthy, and why are they so?" Dr. Fuchs lays down these inferences:—

1. The influence of professions on the morbility and mortality in general is remarkable; the differences in these respects between particular professions are great.

2. The mortality and morbility do not always proceed in the same ratio. Many professions have great numbers sick and few deaths—and the reverse: only eight professions (see table) are equally distinguished by a high morbility and relative mortality; and sixteen others have few sick and proportionally few deaths.

3. According to the absolute *mortality*—according to the loss which a given number of individuals belonging to the same profession suffer in a year—twenty-two professions are unhealthy, thirty-four are healthy.

4. Some agencies regulate the frequency of sickness (morbility), others the fatality of diseases (relative mortality); and hence it is clear that in particular professions the number of sick, while in others the number of deaths, will be high, without the one invariably answering to the other.

5. The absolute mortality, on the contrary, is only influenced by causes which either uniformly raise or lower the morbility and relative mortality, or exercise a *preponderating influence* on one of them; and is, therefore, although its oscillations are generally of a more limited extent, the surest measure of the salubrity of professions.

The results of the present investigations appear then to indicate, that the following circumstances connected with professions augment the mortality: slight muscular exercise, bad wages, constant sitting, the bent posture, exposure to changes of temperature, low spirits, cold, moist air, cold dry air, working in-doors, mineral dust. They confirm the conclusions of Dr. Lombard with regard to the unfavourable influence of penury and misery on health, one of the best established principles in statistics. A sedentary life is shown by each series of observations to be injurious. That education promotes health is, on the contrary, established by both. With regard to the influence of dusts and vapours, the results differ; in fact, neither possessed the means of deciding this question.

This memoir displays great industry, accuracy, and considerable acquaintance with statistics; in many respects it merits more attention than any thing that has yet been written on the hygiène of professions. One capital

fact it establishes, that in favourable circumstances one man in four, or 22·8 per cent. has an attack of sickness annually; or, more precisely, 23 per cent. apply to friendly societies on the ground of sickness. Similar and more comprehensive researches we hope soon to see instituted in every part of Great Britain where there are benefit and health assurance societies.

BIBLIOGRAPHICAL NOTICES.

Tweedie's System of Practical Medicine, Vol. 2. Diseases of the Nervous System.[1]

The favourable opinion, which we expressed of the first volume of this work, may with propriety be transferred to the present. It offers, too, an additional attraction in having the notes and additions—the "American notes and additions," they are termed on the title-page—of a scientific observer on this side of the Atlantic. The pathology of the nervous system, hydrocephalus, apoplexy, delirium tremens, cephalagia, epilepsy, catalepsy, and allied affections, spinal irritation, spinal meningitis, inflammation of the spinal cord, hydrorachis, spinal apoplexy, tetanus, hydrophobia, paralysis, barbiers and inflammation of the ear, are from the pen of Dr. Bennett; inflammation of the brain, from that of Dr. Hope; insanity, from that of Dr. Prichard; chorea, hysteria, neuralgia, from that of Dr. T. Thomson; and inflammation of the eye and amaurosis from that of Dr. Taylor.

The chief notes by Dr. Gerhard are on delirium tremens and hydrocephalus; but numerous other pertinent comments are distributed through the work. On the treatment of the first-mentioned disease there is between Dr. Gerhard and ourselves a known difference of sentiment,—Dr. Gerhard believing that the alcoholic method is decidedly to be preferred, whilst we think it is very rarely necessary, or, in other words, that if a proper classification be adopted, there are but few cases which can require its employment. We are not prepared to say that the recuperative powers are in all cases sufficient to restore the individual without the employment of the wonted stimulus, but we believe the case in which it is indispensable to recovery is not often met with. In all our public and private practice, we have endeavoured to diminish as far as practicable the employment of alcohol in the treatment of delirium tremens, not because the individual cannot be brought back by it to the state in which he was prior to the attack, in the generality of instances, but because the moral effect must necessarily be—to hold out to the drunkard that the continuance of this deplorable habit is necessary to his health, and the main reliance when he becomes diseased. Were alcohol *proved* to be indispensable, we should adopt the practice universally, but we should adopt it with regret. We do not, however, consider that the numerical results adduced by Dr. Gerhard constitute this proof; not even those

[1] Dissertations on Nervous Diseases, by James Hope, M. D. F. R. S., Physician to St. George's Hospital, &c.; J. C. Prichard, M. D., F. R. S., M. R. I. A., Corresponding Member of the National Institute of France, Senior Physician to the Bristol Infirmary, &c.; John Hughes Bennet, M. D.; Robert H. Taylor, M. D., Liverpool; and Theophilus Thomson, M. D., Physician to the Northern Dispensary, &c. Edited by Alexander Tweedie, M. D., F. R. S., Fellow of the Royal College of Physicians, Physician to the London Fever Hospital, and to the Foundling Hospital, &c; with American Notes and Additions, by W. W. Gerhard, M. D., Lecturer on Medicine, Physician to the Philadelphia Hospital, Blockley, &c. 8vo, pp. 551. Philadelphia, 1840.

which he cites as having been observed in the men's wards under his care in the Philadelphia Hospital, from October 12, 1839, to October 12, 1840. Of 162 cases of decided delirium tremens, 87 were admitted in the first stage, 73 in the second, and 2 in the third; 160 cases recovered, and one remained convalescent, who is since well. "One only proved fatal; the patient was admitted in the third stage of the disease, and died in a few hours after his entrance; he had been treated with opium, and a box of pills, which he was taking, was sent to the hospital with him." "Of course," adds Dr. Gerhard, "this apparent exception confirms the general conclusion, that the disease terminates favourably in every instance when treated according to the method recommended."

Dr. Gerhard will, we are satisfied, appreciate the force of the remark, that any inference from a single year's observation may be fallacious; especially when a similar system of treatment had been adopted, by him and by others, in former years, and with less favourable results. It is a well known fact, that in certain seasons and years diseases are more severe than they are in others; and we think the circumstance, that, of the 162 cases of delirium tremens referred to by Dr. Gerhard as having been admitted in the year ending October, 1840, only *two* are classed in the third stage, sufficiently exhibits that the disease was unusually mild. We have before us a summary of the cases treated in the men's and women's Lunatic Asylum, Blockley, from January 1st, 1839, to January 1st, 1840, politely furnished us by an estimable colleague, and published in the number of the "Intelligencer" for June 1, 1840. According to this summary, it would appear that the number of cases admitted into both asylums during the past year was as follows:

Delirium tremens.	Men's.	Women's.
First stage,	91	40
Second do.	78	12
Third do.	31	15

Of those in the third stage on the men's side 6 are reported to have died; of those on the women's side 2. In the first and second stage none died.

We cannot, consequently, consider that Dr. Gerhard has "settled the value" of the treatment "upon a more definite basis than has yet been done." We should desire to see him continue his investigations through a succession of years; to compare, as extensively, and under circumstances as nearly identical as possible, different methods of treatment, and to communicate hereafter the results of his additional experience.

Dublin Dissector.[1]

This is not truly the first American edition of the Dublin Dissector; although the first "from the fifth enlarged Dublin edition." The value of the work is well known, and its utility has been increased by the additions of

[1] The Dublin Dissector, a Manual of Anatomy; comprising a Description of the Bones, Muscles, Vessels, Nerves, and Viscera; also the Comparative Anatomy of the Different Regions of the Human Body; together with the Elements of Pathology. By Robert Harrison, A. M., M. B., T. C. D., &c. &c. First American, from the fifth enlarged Dublin edition; with Additions by Robert Watts, Jr., M. D., Professor of Anatomy in the College of Physicians and Surgeons in the city of New York, &c. &c. 12mo, pp. 541.

the American editor. We need scarcely add, that it is one of the best, if not the very best, companions to the practical anatomist.

We recommend the work most conscientiously to the attention of every reader.

Lee on a Filaria in a Horse's Eye.[1]

This is an account of the Filaria which we had an opportunity of seeing in the eye of the horse, and which was described in a former number of the "Intelligencer." Dr. Lee, with us, regards it as the Filaria papillosa. The following are his views as to the mode of origin:

"Ehrenberg has clearly proved by his careful microscopical observations, that these animals have organs of reproduction clearly developed, and never deficient; indeed, surpassing in development, for the most part, those of other organic systems; thus plainly pointing to a predominant cyclical development, in the same manner as we find in the higher organisms. Ehrenberg has also shown that the fecundity of these animals is most astonishing, each female producing thousands, if not millions, of ova at a time. The same diligent and accurate observer states, that if we carefully examine animal bodies, whether of man or other animals, we shall, in nearly all cases, discover worms of some kind, and that we do not meet with more, he thinks is owing to the great difficulties in the way of the development of the ova, among which the resistance of the vital principle is not the least. He therefore believes that the eggs of intestinal worms are taken into the circulation and carried into all parts of the body, but are developed only where the particular conditions requisite for this purpose are favourable. 'The smaller diameter of the finest vessels through which they have to pass,' he remarks, 'does not appear to me to present any important difficulty, because these, as we see in every inflammation, become easily and quickly expanded as soon as they are irritated; and these eggs may, as excretive bodies, like every body which is foreign to our organism, act in an irritative manner, and may be taken up by the embouchures of the absorbents, and be propelled along with increased activity through them; that this is the case with mercury, pus, and other matters, has been already received as an observed fact. It is even probable that the eggs of the *Entozoa* and their propulsion through the vascular system may be an important morbid matter hitherto overlooked, and which causes a part of the phenomena comprehended under the name scrofula. In bodies which are particularly favourable to the development of worms, there must necessarily be an innumerable quantity of secreted eggs of these parasites, which, if they are not expelled by the intestinal canal, or by the *primæ viæ*, must, as foreign bodies, produce disorders. If the absorption takes place entirely or for the most part in the lymphatics, it would occasion their general or sole influence upon that system. Obstructions in the lymphatics, but especially in their reticular tissue, the glands, which lead to local congestions of lymph, inflammations, and morbid appearances of various kinds, become in this manner very easy of comprehension; and these assuredly deserve the attention of medical science, not as speculations, but as realities. Thousands of eggs of intestinal worms, whose existence in many bodies cannot be denied, must perish, as they are rarely developed in such great quantities, from the difficulty of their attaining the place and conditions favourable for their development; while only some, very often none, ever actually attain those conditions. This relative proportion of the number of intestinal worms and of their eggs to the organs of the

[1] An Account of a Filaria in a Horse's Eye, with Remarks on Similar Phenomena, and the mode of their Origin. By Charles A. Lee, M. D., of New York. 8vo, pp. 19, From the Amer. Jour. of Science and Arts, No. 2, Vol. 39.

larger animals, is also found to exist. There are very often observed in animal dissections a small number of full-grown worms, filled with an innumerable quantity of eggs, without any young in their proximity; and I was often astonished to find in the considerable number of my dissections of animal bodies, (I have brought from Africa alone intestinal worms of 196 species of animals, all of which I have myself dissected, and of some from 40 to 50 individuals,) only a few alive, although these were completely filled with eggs. Thus from laborious observations this opinion has become more and more firmly fixed in my mind, that it is much more astonishing how the great fecundity of the Entozoa should be so limited by the living organs, than that it should be possible that living worms should inhabit them, and, considering their diffusion, escape observations which are generally superficial.'

"Such are the views of this very able naturalist on this difficult subject, and I believe they are those which eventually will be generally adopted. In this manner can we only satisfactorily account for the existence of worms in the fœtus of man and other animals, and in the intestines of chickens and the young of other birds, which have just broken the shell; numerous instances of which have been recorded by Rudolphi, Blumenbach, and others. I see no great difficulty in the supposition that these ova are absorbed by the lacteals and lymphatics, and carried into the circulation, as they are known to be smaller than the particles of quicksilver, and the colouring matter of madder, &c., which it is well known are constantly taken up and deposited in the bones and other tissues of the body. We believe, then, that it is in the highest degree probable, if not actually proved, that the minute ova are thus introduced into the blood, carried to every part, and *there* only hatched when they meet with a suitable *nidus* or *pabulum*, and other circumstances are favourable to their development.[1] Thus are they transmitted from parent to offspring, and thus do we account for the fact that each species of animal has its own parasites. In this manner the ovum of the *Filaria* was deposited in the eye of the horse now exhibiting in this city, there hatched into existence, and where it may now be seen, reveling in an element which appears, so far as we can judge, to be highly congenial to its nature and habits."

MISCELLANEOUS NOTICES.

Vermont Academy of Medicine.[2]—From the Circular, with which we are favoured by Professor Bryan, we find that the following gentlemen compose

[1] "A very curious disease of the eye has in a few instances been observed. The common symptoms of ophthalmia appear,—as injection of the conjunctiva, dimness of the cornea, weeping and swelling of the cornea. These are properly attended to, but the inflammation increases; and on very close examination, *a small white worm*, about the size of a hair, and an inch in length, is found swimming in the aqueous humour, or that fluid which is immediately behind the cornea. Now it is at once evident that the only way to get rid of or to destroy this worm, is to puncture the cornea and let it out; and this method has been resorted to. In some cases, however, not many days pass before another worm makes its appearance, and the operation is to be performed a second time, and the horse eventually loses that eye. A veterinary surgeon, M. Chaigraud, who seems to have had most experience about this, says that three or four days before the appearance of the worms, *one or two minute bodies, of a reddish white colour, are seen at the bottom of the anterior chamber of the eye.* He also says that the disease appears about June, and is not seen after December. There is no difficulty about these animalcules getting into the eye, for there are undisputed instances of their passing through the smallest capillaries, and being found in almost every tissue."—*Youatt on Cattle*, p. 293.

[2] Annual Circular of the Vermont Academy of Medicine, for the Session of March, 1841. Castleton, Vermont, October, 1840. 12mo, pp. 12.

the faculty:—Horace Green, M. D., Professor of Theory and Practice of Medicine; Robert Nelson, M. D., Professor of General and Special Anatomy and Physiology; James Hadley, M. D., Professor of Chemistry and Pharmacy; James Bryan, M. D., Professor of Surgery and Medical Jurisprudence; Joseph Perkins, M. D., Professor of Materia Medica and Obstetrics; C. L. Mitchell, M. D., Professor of General Pathology; and Egbert Jamieson, M. D., Demonstrator of Anatomy.

Yale College, Medical Department.—From the Annual Catalogue of Yale College, with which Professor Hooker has favoured us, we discover that the number of medical students during the last session was 52.

On Paullinia, a New Medicinal Substance. By Dr. Gavrelle.[1]—Paullinia is an extract from a plant of the same name, originally from Brazil, which extract is prepared by the Indians, and appears to possess a very energetic stimulating action. M. Gavrelle has presented a specimen to the Society of Medicine, together with a new alkali, which two chemists of Paris had separated by analysis. The extract and alkali are very bitter, and exhibit great analogy with caffein.

It is probable that paullinia, or the extract which bears this name, is extracted from several plants of the genus Paullinia, which contains thirty-one species, and is of the natural family Sapindaceæ; and Octandria, Triginia, in the artificial arrangement.

This genus has received its name from being dedicated to Simon Paulli, a physician and botanist, who was born at Rostock in 1603, and died at Copenhagen in 1780. This physician was the author of several works, and more notably of *Quadripartitum de Simplicium Medicamentorum Facultatibus*, 1668, in 4to; a work upon the abuse of tea, tobacco, &c.

Paullinia Africana is employed in Senegambia to arrest hemorrhage, by the application of the powdered bark to the wounded parts. The bark of the *P. Asiatica* is used at Bourbon as a febrifuge; in India the bark, the leaves, and the fruit are employed as a decoction, prepared with four grammes of these substances, as a remedy for venereal complaints, rheumatism, gout, and cutaneous affections.

The seeds of *P. eupana* are used by the Indians of Oronoko; they mix them with cassava and water, and leave them in contact. When the liquid mixture begins to putrefy, which is denoted by becoming of a yellow colour, and acquiring a bitter taste, they draw off the clear portion and mix it with the water which serves for their common drink.

P. Mexicana possesses, according to Hernandez, the properties of sarsaparilla.

The seeds of *P. pinnata* are stupifying; they answer in Brazil and the Antilles to poison fish. The leaves of paullinia are, according to Pitron, vulnerary. The *P. serjania* also furnish seeds, which produce drunkenness.

Finally, according to Martins, an extract is prepared from the *P. sorbilis*, known in Brazil under the name of *guarana*, which is a medicine composed by the Indians of Para, and is made up by them in the form of lozenges, weighing 125 to 250 grammes.

The colour of the guarana is brown, and in the mass is composed of lumps which are less coloured interiorly than on the surface. This product is hard, very light, inodorous, and of a slightly bitter taste, without any sensible astringency. Gomez states that the guarana is efficaciously used in Brazil for dysentery, and for diseases of the urinary passes produced by

[1] From American Journal of Pharmacy, October, 1840, p. 206.

relaxation, four to six grammes being taken in a glass of water; according to M. Batka, the guarana contains a vegetable alkali called guaranine.

M. Gavrelle gives the following details on the paullinia, which he has frequently used; he states that it is the product of the *P. sorbilis*, family *Sapindaceæ*, of which the fruit bears great resemblance in colour to the cocoa, its odour is *sui generis*, its taste bitter, analogous to that of rhatany.

It is prepared by separating the seeds from the capsules, exposing them to the sun, until the integuments will separate by simple pressure; they are then reduced to a fine powder.

M. de Chastetus has found in them gum, amidon, a brownish red resinous matter, and a crystallisable matter, which possesses the chemical properties of caffein.

In Brazil and the neighbouring countries it is given as a drink, mixed with cocoa, for dysentery, and as a tonic. Since it has been brought to France, M. Gavrelle has employed it with success in chlorosis, tedious convalescence, paralysis, the looseness of phthisis, headache, &c., by which it may be seen that its use is similar to that of *guarana*.

Mode of Administration.

From numerous experiments carefully made, we are led to the conclusion that the extract made with diluted alcohol is the preparation which would most exactly represent the properties of the plant.

1. *Lozenges of Paullinia.*

Hydro-alcoholic extract, 21 gram. 3 dec.
Sugar, scented with vanilla, 560 „
Make into lozenges, each containing 6 decigrammes.

2. *Syrup.*

Hydro-alcoholic extract, 10 gram.
Syrup, 1000 „
Fourteen grammes may be given in a day.

3. *Pills.*

Hydro-alcoholic extract, q. s.

To be made into pills containing each a decigramme, with a sufficient quantity of powdered liquorice.

On the Operation for Strabismus. Claims of M. Jules Guerin. By M. Jules Guerin.[1]—In a letter on the treatment of strabismus, addressed to the Academy of Sciences, 29th June, 1840, M. Guerin says: "I have the honour to inform the Academy, that I have four times practised with success the division of the muscles of the eye, in cases of convergent strabismus. I shall briefly state the principles which have directed me in this operation. I had long and publicly professed that strabismus was the result of the contraction of the muscles of the eye; and the varieties of this deformity the necessary consequence of different degrees of contraction. It is in fact an application of my general theory of articular deformities in the skeleton, and caused one of the most eminent members of the academy to designate strabismus as *club-foot of the eye*."

M. Guerin goes on to state, that in his clinical lectures he frequently proposed to extend division of the muscles to deviations of the eye, in the same manner that he had applied it to deformities of similar origin, and that eighteen months since he offered to cure Dr. Pinel Grandchamp of strabismus by means of this operation. He proceeds: "As for the operation itself, it differs in some respects from that of M. Dieffenbach. One of the reasons which induced me to pause before attempting his method, was the fear of inflammation occurring in a wound exposed to the air upon a delicate organ, and so near the cerebrum. These accidents I feel certain of avoiding by the following method:

[1] L'Expérience, Juillet 9, 1840; and Br. and For. Med. Rev., Oct. 1840, p. 572.

"In place of dividing layer after layer, I detach the portion of ocular conjunctiva which covers the muscles from the sclerotic, and raise it with broad-nibbed forceps until the muscle is exposed. This being divided with curved scissors, I restore the detached portion of conjunctiva to its place; this, by closing the wound, prevents the access of air, and obtains all the advantages of a subcutaneous wound. Experience has confirmed my preconceived notions of the theory; in the four operations I have performed, there has been no sign of suppurative inflammation.

"The result of these operations has been very satisfactory; but not so immediately advantageous as M. Dieffenbach observed. In one instance there was a complete and instantaneous restoration of the natural position of the eye, in the others only an amelioration. This circumstance appears to be a natural consequence of the true origin of strabismus. At one time the deviation of sight is originally muscular, and the result of spasmodic contraction in a single muscle; at another time the contraction is consecutive or even primitive; but it has simultaneously affected many muscles.."

On the Cure of Strabismus. By Dr. F. A. von Ammon.[1]—[In the great number of the papers written on this subject, it is scarcely to be expected that more than two or three remarks on each should be worth abstracting. In the present article, by the editor of the Monatsschrift, the following passages are worthy the attention of our readers]:

A principal point is the determination of the indications for the operation; and I think it the more important, because the whole history of the affection, notwithstanding the works of many excellent physiologists, is extremely obscure and uncertain. Nor could this be otherwise, when the abnormal position of the eye is in different cases so varied, and so often the consequence of diseased conditions of the brain, the abdominal nervous system, and of the globe itself. Here is a wide range for the production of the disease, independently of the cases which are produced by diseases of the orbit. No rational physician will expect to cure such a strabismus by myotomy; and the operation can be applicable only when the malposition of the eye is primarily dependent on the muscle, i. e. when there is a shortening of one of the muscles of the eye, which holds the eye to one side and limits its motions towards the other; but even here more than one condition must be laid down.

But unfortunately the necessary basis of the operation, pathological investigation, is at present absolutely and entirely deficient; no one has yet clearly convinced himself on the dead body that a shortened state of the muscle exists in squinting. The operation, however, may itself be made the means of investigating the nature of the disease; and here again, as has been the case with club-foot and wry-neck, surgery may be made the assistant of pathology.

With regard to the true orthopædics of the eye, i. e. its acquiring the right position after the operation, this consists in the constant endeavour and active exertion of the patient to give his eye the proper direction. A club-foot or a wry-neck would just as soon return to its right position after division of the tendons without assistance as a squinting eye will. A good method of insuring success is to tie up the sound eye; the eye that has been operated on then always moves to the centre of the orbit, and the longer it is kept there the more likely it is to remain. In few cases will this or some similar measure be unnecessary.

The author also suggests the propriety of endeavouring to make a subcutaneous, or rather a subconjunctival division of the muscle, which he believes would avoid all the inconveniences to which the present method is subject. He has performed it on the dead subject and on animals, and has no doubt it may be applied to actual cases of strabismus.

[1] Monatsschrift für Medicin, &c., June, 1840; and Br. and For. Med. Rev., Oct. 1840, p. 373.